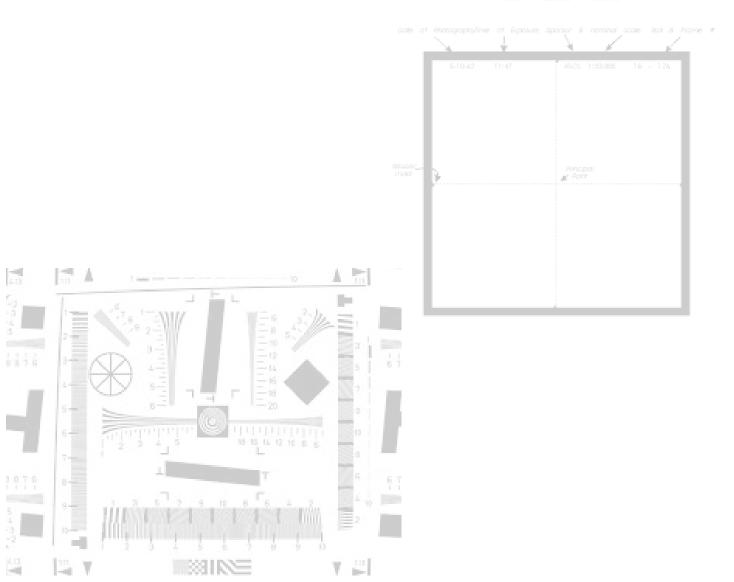
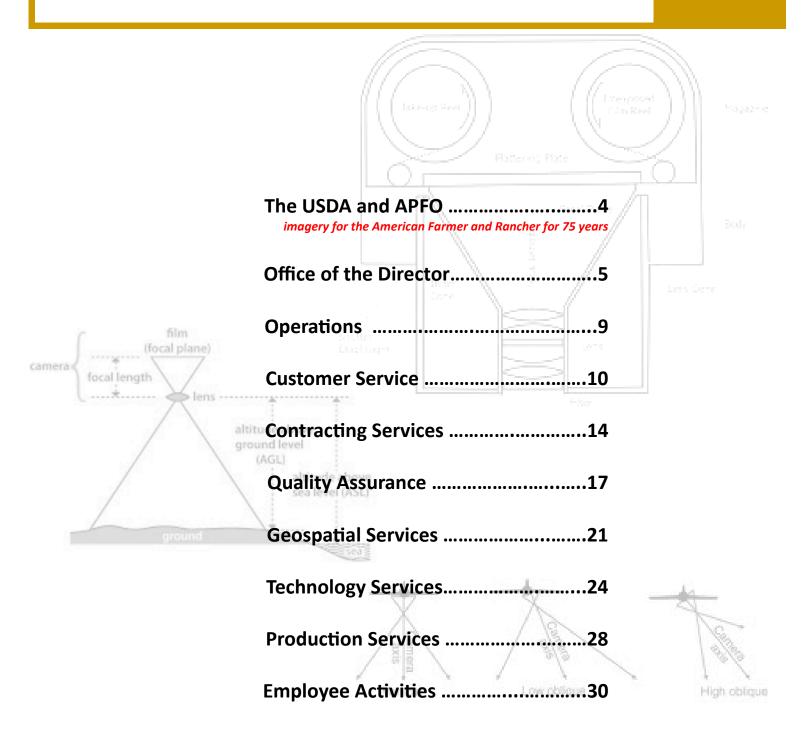


The Aerial Photo



ON THE COVER: The "ifga" symbol is superimposed on a crop field by APFO Visual Information Specialist Tom Dolan. The "ifga" represents the geometrical equation for aerial photography (the i= the film plane, f= the focal point, g= the ground distance and g= the lens to ground distance) sounds fun huh?!

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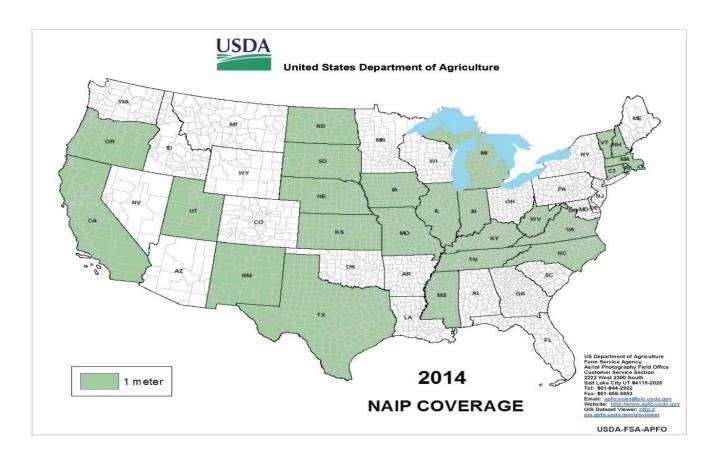




panoramic camera



## UNITED STATES DEPARTMENT OF AGRICULTURE FARM SERVICE AGENCY AERIAL PHOTOGRAPHY FIELD OFFICE



Agriculture is a vital sector of the U.S. economy. Every American benefits from a strong U.S. agricultural industry that provides the abundant food and fiber supply necessary to sustain a stable and prosperous country. The Farm Service Agency (FSA) of the U.S. Department of Agriculture (USDA) plays a critical role in maintain that strength. The Aerial Photography Field Office (APFO) supports the missions of the USDA and the FSA through various aerial imagery acquisitions and analysis programs.

Aerial imagery or photography provides effective solutions which combine cost effectiveness and high precision for planning purposes, volume calculations, compliance verification, or merely to renew existing mapping. Aerial imagery offers various applications such as geospatial technology, natural resources management, disaster management, risk identification & mitigation, and conservation & research.

The use of aerial imagery is on the rise with the availability of high resolution imagery from numerous suppliers. Geospatial technology has continued to prove itself as a promising application for our industry as the potential enduse verticals of aerial imagery in the agricultural industry are numerous. APFO continues to explore the advancements in this field and match them to the strategic goals and objectives of the FSA in meeting the challenges of bringing comprehensive and relevant programs to the farmers and ranchers of our country.



#### "From Rags to Riches"

July 3rd, 1978—where were you? I had just started my new job at APFO on that memorable day. Back then, I was a recent graduate from Weber State College in Ogden, Utah in the field of Business Management, and now with a 4 year degree I was starting my career as a federal employee, my title was a Quality Assurance Aid, GS-3 step 1. Even better I was on my second day at my new job. It was a Federal Holiday, July 4th and I did not have to work and still got paid. What a job! What a great new career I had!

As I started learning my job and responsibilities associated with it, it seemed strange that of the estimated 100 employees at APFO, nearly half of them smoked; mainly cigarettes, but some smoked pipes and some smoked cigars. I was responsible for picking up photos from the 15 or so photo processors and organizing them by the employee that printed them. My main responsibility was

to the B&W section of the Photo Branch, where there were approximately 20 photographers that I was continually organizing their photos. The APFO during these years was printing over a million photos per year, so on any given day thousands of photos were printed and organized and separated by employee.

Three Years later I applied for an Administrative position at APFO and was selected. This position involved working with both the Administrative side of APFO as well as the Contracting Department. The old saying that it is hard to serve 2 masters soon became evident and I was permanently assigned to just the Administrative side of APFO. I reached a milestone on February 20th, 1983; I was promoted to a GS-7 Administrative Technician and making nearly \$17,000 per year, I now thought I was going to be rich. But as I soon learned, the GS-7 salary was not going to make me wealthy, just want more.

Two years later I got my shot at contracting work, and I was promoted to a GS-9 Contracting Specialist (for sure now I was going to be rich), but just as before, I found out the \$21,000/per year salary with a wife and three kids didn't go as far as I had thought it would. It was around this time I got my first taste of travel and formal training. I was assigned to attend a 30 day contracting class in Washington, DC and was scheduled to leave Salt Lake 2 days after our 4th child was born and released from the hospital. My wife insisted that she would be fine and it would be good for my career to attend the training, so I went.

I had never been on an airplane until now and enjoyed it a lot. When I landed at the airport, my luggage came from a shoot some 20 feet above the passengers. My suitcase back then was my wife's pink Samsonite, so it would be easy to spot, and as I saw it coming out of the shoot, it was wide open with undergarments spread all over. I quickly gathered my belongings and got a taxi to the hotel. At this time in government service, when you traveled you were allowed per diem and my allowance per day was \$55.00. This was to cover both the hotel costs and my food cost. As a result, my hotel was not real fancy but still cost \$51.00 per day, leaving me only \$4.00 per day to eat on. But I didn't go to get fat and found ways to get by.



The first weekend, of training APFO former Director Floyd Payton (he was now working in DC) invited me to his house for dinner, so yay I got to save my \$4 for a feast the next day. That evening after getting back to my hotel turned out to be one of the worst days of my life; I was awaken by noises outside, I could not clearly understand what the people were yelling about because the window was hammered shut. I quickly dressed and headed out the door only to find the entire hallway engulfed in smoke. I am really not sure how, but I was able to drift down the hallway to the stairs and as I tumbled down I was greeted by the local fire chief. His first words to me were "I thought everyone was out of the hotel". The rest of this 30 day training went well and somewhat uneventful.

On October 8th, 1985 I got my first warrant as an official Contracting Officer, the dollar amount I could spend was \$100,000. A year later, I became the Administrative Officer for APFO and maintained my Contracting warrant at

the GS-11 level (surely I was to be rich now), but just like previous times, my growing kids and increased needs would keep my dreams of being rich from materializing. I stayed in this position for the next few years, APFO was still producing over a million photos per year and the staff size was over 100 employees. A few years later, I was promoted to the Deputy Director and about a year after the last Director retired (Ronald Dickson) I was promoted to the Director of APFO, the date was July 7, 1996 and I have been fortunate to hold this position ever since.

As I look back through the years, what I remember most is the employees and the activities we had, the conversations that occurred and how my family grew just as my career did. I am still married to Pamela, have four grown children and now eleven grandkids. I may not have the riches that money brings, but I am the richest person I know because of the family and friends I have. My wish for you as you approach retirement is that you have the riches that I have come to appreciate, and remember, it is not about the dollars you earn that determine how rich you are, but the memories of friends and the family that you are part of that really matter in determining your riches.

Best wishes to each of you. As long as you believe and give an honest days work for a days pay, APFO will continue to thrive.





#### USDA – FSA Aerial Photography Field Office Salt Lake City, UT

FTEs - 57 Contractors - 2

Management **Operations** Branch Denny Skiles

**Customer Service** Section **David Parry** Debbie Burridge Linda Cotter Jerry Lohry

#### Administration / **Personnel**

**Danette Danner** Jesse Evans Amy Penechar

Contracting John Mootz **Bridget Barlow** Michelle Clifford Jacque La Croix

Office of the Director Ronald B. Nicholls Kent Williams

**Quality Assurance Branch** Sherry Holyoak

**Ortho Imagery** Inspection **David Wheeler** Jose Callejas Mary Carlson Doug Clark **Kerry Jones** Scott Kelly David Moore Dan Oles Glenda Petersen Jay Phibbs

**Resource Imagery** Inspection Susan Callihan Mark Cox Jeanette Tolliver

Tonja Ruben

Anita Stevens

**Production Services Branch** John Stadelman

**Photographic Services** Ricky Holt William Sanders Mark Schneller

> **Scanning Section** Jon Boyden Tom Dolan Jerry Roach Vikki Wynn

**Geospatial Services Branch** Brian Vanderbilt

Service Center Support Zack Adkins Joan Biediger **David Davis** Louise Mathews Nathan Pugh

**Geospatial Services Hugh McGirt** Forrest Gladding Quin Ourada Danny Petersen Cliff Ruben

**Technological Services** Branch Lori Uhlhorn

**Technological Services** Rhonda Fisher Marla Jo Porter

> **Digital Data** Management Distribution **David Nabity** Randy Emero Shane O'Neil

Application Development **Bonnie Hayes** Ryan Heaslip **Brad Losito** 

**Contractors** Kevin Clarke Tatyana Myakisheva

#### **Imagery Program Management**

Through FY14, APFO continued to provide leadership in acquiring current, high quality imagery for FSA and other USDA agencies. The year brought challenges in the form of a Congressional directive to report on funding alternatives for expanding NAIP to an annual collection cycle, and a GAO audit that looked at possible duplication in aerial imagery acquisition in USDA. While there are no clear cut indications for action from either situation as of late November, both presented opportunities to show the value of aerial imagery to FSA, USDA and the broader community, and the reality of minimal duplication of effort in terms of image acquisition that exists in USDA.

FY14 brought the 12th consecutive year of NAIP acquisition, with increased value to FSA at a continued drop in costs. Prices from NAIP contract task awards were 7.8% lower from FY13 on average, which led to image acquisition for 25 states. We saw increased value in the form of expanding Early Access Web Services that provided access to imagery within a week of acquisition in 22 States. The continued success of NAIP



speaks to executive level support for the program within FSA and partner agencies, a high level of performance from our contractors, and to the skill and professionalism of employees throughout FSA and APFO.

We continued to work closely with our partners and customers in the USDA Forest Service and NRCS to develop contracts that meet their specific agency requirements for imagery, while leveraging technological advances in industry to provide opportunities for increased value. With an ever present requirement to maintain fiduciary and contractual integrity, we have continued the transition to a project management approach in working with our USDA partners, resulting in better distinction between the development of partner business requirements and contractual obligations. In a related effort, we continued working towards more transparency in documenting and recovering reimbursable expenses in the work we do for other USDA agencies.

Historical aerial photography became more prominent in APFO operations in FY14. Driven in part by the need to minimize our footprint when moving to a new facility, planned for early 2017, we doubled the capacity of our film scanning operations, stepped up coordination with our partner agencies with film residing in the APFO vault, and reached out to industry to help look for solutions in making historical imagery available to USDA and the public in general. Instead of risking the perception of a being a financial burden, we are on the threshold of enabling the USDA historical imagery record become an invaluable national asset.

We look forward to our annual planning meeting in December, where we meet with our partners in other USDA agencies and with industry to discuss what worked, what didn't, and how best to move into 2015.

### **Operations**

What a year it has been for the Operations Staff, it seems that there was always something going on in any of the specific sections; Administrative Services, Human Resources, Customer Service, Facility Management, Budget, Supply, Property/Shipping and Receiving/Warehouse Management; various procurement actions, physical security of the building and Program Management of the Intermountain LincPass Activation and Enrollment Center.

FY 2014 was a good year for getting the internal measures taken care of within APFO. As budgets across the board got a little smaller in FY 14, APFO was able to recover \$503,306 in reimbursable fees from customer sales. To become more efficient, APFO started an organizational assessment which looks at each position in the organization and updates the skill sets and functions we need for a more positive future.

Getting the word out about what we do is also important. Our continuous Public Information Campaign highlights our services and products on a wider basis and paid off big when the APFO reached out to users of the Geospatial Data Gateway. In our effort to relieve traffic from the portal providing access to Compressed County Mosaics (CCMs) we advised big data downloaders of our boxed sets of current and past CCMs which provides a faster and more reliable dataset. 4 of the top 6 users placed orders though Customer Service and helped reduce the load on a very taxed website.

#### Some of our big efforts:

- **APFO Organizational Assessment** In FY 14 APFO went through every job, in every Section, in every Branch. Some employees had been in the same job for 20 years with no update in their position description and with the small amount of turn over APFO has it was easy to see how we got down to the work of our customers and put taking care of ourselves on the back burner. Now APFO has relevant and up to date PD's that truly tell the story of our awesome employees.
- Internal Support— taking care of our own was a recurring theme for the Admin/HR section. By working within the FSA family, APFO was able to identify much needed Contracting Officer training resources and get another Contracting Officer through warrant training and certification. This increases our capabilities and services we can offer FSA. Operations Leadership served as Mentors for Protégé's in the FSA Mentoring Program. APFO also served over 1100 government employees with LincPass appointments.
- "Show me the money"— FY 14 was another year of financial gains for APFO. Recovering \$503,306 through the APFO Customer Service Section Sales efforts went a long way in reducing APFO's yearly expenses. Add to that our streamlining efforts and reimbursable contracted agreements, we added another \$399,651.79 to the recovered funds, thus helping ease the budget strains.
- Supporting our Veterans— APFO recognizes the sacrifice that our Veterans
  make in defending the liberties we all enjoy. In cooperation with the Dept of
  Defense APFO hosted a program that allows veterans recovering from war
  wounds to train alongside federal employees. The Veteran learns new skill
  sets and we get to train a potential new colleague. That's a win-win!!

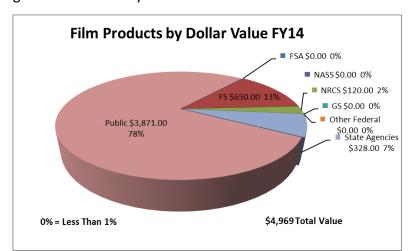
As part of the Operations Branch, the Customer Service Section (CSS) is responsible for the receipt, preparation, and releasing of work orders and coverage requests for aerial photography, digital imagery, and common land unit products and services. CSS is the liaison for the Aerial Photography Field Office (APFO) to other government agencies and the public. Maintains and monitors all fiscal activity dealing with the sale of aerial imagery and related products and services. Working to serve each customer as their primary source of technical information concerning USDA aerial imagery and common land unit data of the United States and its territories. Account and reconcile funds from all government agencies and the public.

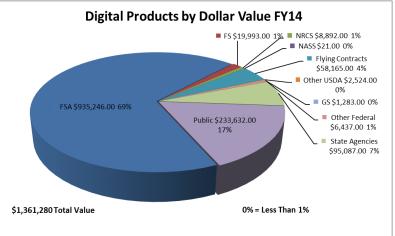
Coverage research is performed utilizing Geographic Information System (GIS) tools to identify historical imagery and attributes needed for traditional and custom digital photographs. The CSS assists customers with and updates GIS content for maintaining the GIS Dataset Viewer, Interactive Coverage Status Map, and downloadable quarter quad and film center shape files on the APFO website.

The most important asset we have at APFO is the employee, CSS Customer Service Representatives have consistently ranked well in satisfaction surveys because of the time they take with the customer and the level of service they provide. FY 2014 orders processed exceeded \$574,574 with digital products and service outselling film based by an average of 3 to 1. One highlight of the year came as CSS completed the post 1980 ASCS/SCS film center shape files which enabled thousands of historical images to be accurately identified.

#### Major Work Activities Performed

Activity	Number of Activities
Work Orders Processed	917
APFO Internal Work Orders I	Processed 706
Coverage Requests	648
Walk-In Customers	74
Telephone Calls	2,818
Catalog Registers	716
5 5	
Billings and Refunds	65
Written Correspondence	6,750
GIS Projects/Searches	1 2/11
GIS Projects/Searches	1,341





#### **Accomplishments & Noteworthy Activities**

#### GIS Dataset Viewer -

FSA/NRCS (ASCS/SCS) Historical Coverage—Added film center layers of post 1980 flights for:

#### GIS Dataset Viewer (Continued) -

Florida – 1989 ASCS Partial

Idaho – 1989 ASCS Partial

Illinois – 1993 SCS Partial (Midwest Flood)

Iowa - 1993 SCS Partial (Midwest Flood)

Kansas - 1993 SCS Partial (Midwest Flood)

Missouri - 1993 SCS Partial (Midwest Flood)

North Carolina – 1988 ASCS

New York - 1990 ASCS Partial

Oklahoma - 1990 ASCS

Oregon – 1990 ASCS Partial

Users – Weekly page views average 700 per week with 30% return visitors. Majority of users are FSA state and county offices.

**APFO Service Quality Survey Results** – A total of 71 surveys were collected from 917 customer opportunities for an overall response rate of 7.7%.

67% of surveys were submitted online.

33% of surveys were promoted from the form included with shipments.

Customer Satisfaction: Communication 95%, Research/Assistance 99%, Coverage/Quality 99%, and Delivery Time 82%.

**Document Scanning to PDF** – Scanned over 3,000 documents to electronic format which include Film Index Cards, Fiscal & Production Reports, and listing of last film archive to the National Archives.

**Volunteer** – Received temporary assistance from a volunteer under a military disability program. Tasks performed include document scanning, APFO website and draft instructions review for critique, filing, and reconciling furniture and equipment inventory.

USDA Data Gateway Media Orders – Received 33 payments at \$7,800.00.

**USDA Branding Compliance** – USDA logo added to the APFO Comprehensive Listings.

**GIS Research & Reports** – Conducted 1,341 GIS project searches at 454 hours and related GIS reports at 117 hours.

Comprehensive Catalog Listings – The USDA aerial imagery catalog listings on the APFO website has a new look. Each State, County, and National Forest listing is now block formatted and bookmarked for easier navigation.

**Detailed Activity** – One employee involved with the Awards Committee and shares collateral duties as Special Emphasis Program manager.

#### **Accomplishments & Noteworthy Activities**

<u>Total Dollar Value \$1,366,249.00</u> – All fiscal activity associated with the sale of aerial imagery products and related services. Amount includes value of internal (Farm Service Agency) archiving and distribution.

Major Revenue Categories	Amount
Collections Receipts	\$155,206.00
Credit Cards Receipts	\$153,681.00
Federal Bills	\$ 23,198.00
Non-Federal Bills	\$ 57,489.00
Miscellaneous	\$ (172.00)

#### **Fiscal Year Statistical Comparison**

Fiscal Year 2014 2,668 Units per Order Fiscal Year 2013 2,788 Units per Order

#### FY14 Customers of Digital Imagery Products and Services

Agency	% of Units	Units	% of Value	Dollar	Value
FSA	5.3	249,521	68.7	\$	935,246.00
FS	0.2	8,452	1.5	\$	19,993.00
NRCS	0.0	1,238	.7	\$	8,892.00
NASS	0.1	3,070	0.0	\$	21.00
Flying Contracts	1.4	68,527	4.3	\$	58,165.00
Other USDA	19.3	917,923	0.2	\$	2,524.00
GS	2.2	103,686	0.1	\$	1,283.00
Other Federal	8.9	420,669	.5	\$	6,437.00
State Agencies	1.9	90,120	7.0	\$	95,087.00
Public	60.7	2,883,184	17.2	\$	233,632.00
Totals	100	4,746,390	100	\$1	,361,280.00

#### **FY14 Customers of Film Products and Services**

Agency	% of Units	Units % of Value	Dollar	Value	
FSA	0	0	0	\$	0.00
FS	9.9	50	13.1	\$	650.00
NRCS	1.2	6	2.4	\$	120.00
NASS	0	0	0	\$	0.00
GS	0	0	0	\$	0.00
Other Federal	0	0	0	\$	0.00
State Agencies	7.9	40	6.6	\$	328.00
Public	81	408	77.9	\$	3,871.00
Totals	100	504	100	\$	4,969.00

#### **Accomplishments & Noteworthy Activities (cont.)**



CSS Supervisor David Parry with new "All in One" Customer Computers

It's not all about crunching numbers or staring at old images, the Customer Service Section has made several positive strides in enhancing the customer experience. One of those enhancements was the deployment of new "All in One" computers. These systems allow the customer to access the APFO services, such as the GIS Data Set Viewer, that would normally be able to see from their home or work computers. In this setting, the CSS Representative can walk the customer through doing research, viewing images and placing an order for products and services. Besides helping the customer with their request for that day, it also serves as a training aide for the customer to learn how to do their own research as these computer systems are connected to the outside internet just as they would be at home.

One of the unique enhancements Customer Service as added this year was a training display monitor at the end of the customer service counter. This serves two purposes: 1) CSS representatives can give or take training as a group more easily. With a pivot arm attached to the back of the monitor we can easily adjust the viewing angle so everyone has a great seat in the house, and 2) the monitor is attached to a computer in the customer service area and can be used to access imagery or web services that are "in house" at APFO. CSS representatives can assist a customer in doing catalog research without having the customer come behind the counter and into the APFO employee workspace



CSS Representative Jerry Lohry conducts training for the staff

## Contracting

APFO **Contracting** is responsible for aerial imagery procurement and coordination of cost share agreements for the Farm Service Agency (FSA) and the U.S. Department of Agriculture (USDA) Agencies. Several national level programs are procured through the Contracting Branch including the National Agriculture Imagery Program (NAIP) for FSA, USDA Service Center Agencies, and partnering agencies; the National Resource Inventory and Stewardship Lands Programs for the National Resources Conservation Service (NRCS); and the Resource Imagery Program for the U.S. Forest Service and other participating agencies.

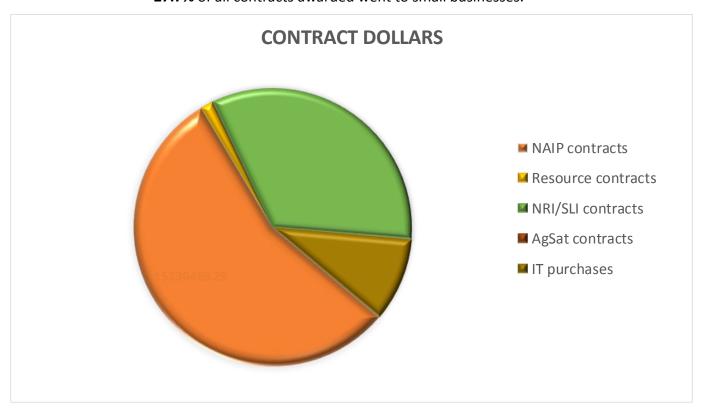
#### <u>APFO Contracting Services by the numbers</u>:

\$27,541,225.63 – Total amount of imagery & IT contracts awarded 1,769,411 – Total number of equivalent square miles of imagery contracted

1,666,837 square miles of NAIP 86,858 sites/exposures supporting NRCS programs 15,155 square miles of U.S. Forest Service lands 561 square miles of AgSat satellite imagery

\$399,651.79 – Revenue generated through administrative fees.

27.7% of all contracts awarded went to small businesses.

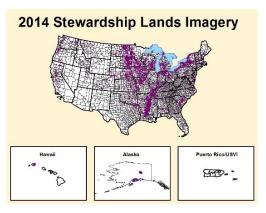


### Contracting

#### National Resource Inventory (NRI) and Stewardship Lands Imagery (SLI)

APFO provided contracting services to NRCS to acquire the National Resource Inventory (NRI), Stewardship Lands Imagery (SLI), and the Highly Erodible Lands (HEL) programs. Aerial photography and related services for 98,159 sites and easement exposures in the 48 CONUS states, Hawaii, and Puerto Rico & Virgin Islands.



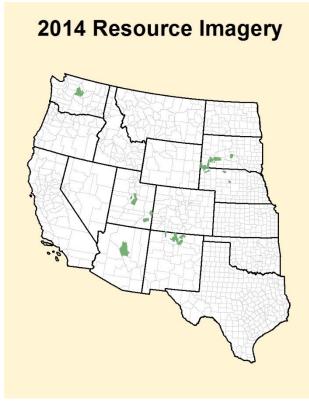


The FY2014 contract task orders were awarded under a second year of a 5 year IDIQ contract for a total value of \$9,188,020.74, with a combined total administrative charge of \$342,159.60

#### **Resource Aerial Photography**

Provided contracting services to the Forest Service (USFS) for a total of 15,155 square miles of digital resource aerial photography for a total value of \$417,923.92. A combined total administrative charge of \$57,492.19 was assessed.

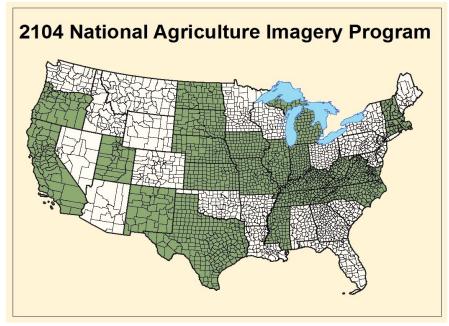
APFO Contracting continues to provide support and assistance in developing standard specifications for digital imagery and support of other digital acquisition requirements and procedures.



### Contracting

#### **National Agriculture Imagery Program (NAIP)**

Since 2003, the National Agriculture Imagery Program (NAIP) has been the primary vehicle for FSA to acquire aerial imagery. Since NAIP is primarily funded by FSA, imagery is acquired to meet specific FSA needs such as collection of entire states within a single growing season, and availability within 30 days of flying season end. Having current imagery saves time in FSA Service Centers, shows change over time, and helps FSA keep CLU boundaries and other critical records current.



NAIP is funded through cost share partnerships, with FSA cost based on the percentage of agricultural land in the US (approximately 67%) while partners in other federal agencies (NRCS, USFS and other DOI agencies) funding the remaining portion.

In 2014, funding was at \$10.14 million from FSA with an additional \$5.1 million from partners. The total amount of \$15.25 million funded the acquisition of 25 states (1,666,837 square miles) with a result that all states in the continental US have imagery that is no older than 3 years.

The NAIP Program is the largest civilian government contract in the country providing

high quality imagery widely used by federal, state, and local agencies as well as many academic and private users.

#### **AgSat BPA Satellite Imagery**

Contracting services were acquired high-resolution satellite imagery through the USDA AgSat Blanket Purchase Agreement (BPA) to support FSA non-CONUS and NRCS SLI requirements. The contracted area of interest covered 561 square miles for a total of \$22,585.59. The APFO managed AgSat BPA is available to all USDA agencies to order imagery directly.

#### **APFO & WDC Information Technology (IT) Contracts**

APFO Contracting does more than administer imagery contracts, with it's vast knowledge of contract and acquisition strategies, several members assist other entities in facilitating their major activities. Providing contract authority and procurement services for the purchase of computer hardware, software, or other related equipment, and maintenance agreements. APFO IT contracts amounted to \$2,676,226.09. WDC FSA also requested \$974,127.72 in IT and related purchases to support FSA programs.



Quality Assurance Branch — Class of 2014

#### **Quality Assurance Branch**

The Aerial Photography Field Office (APFO) Quality Assurance Branch (QAB) is continually developing operational plans to adapt to both new technology and processes designed to efficiently and better effectively support the U.S. Department of Agriculture's (USDA) mission.

APFO-QAB supports the USDA leadership on food, agriculture, natural resources, and related issues based on sound public policy, the best available science, and efficient management, and the Farm Service Agency (FSA). Our mission is to equitably serving all farmers, ranchers, and agricultural partners through the delivery of effective, efficient agricultural programs for all Americans by insuring that quality aerial imagery and geospatial datasets are available for its programs.

QAB's primary mission is to inspect and database discrepancies for contractual compliance imagery obtained for the National Agriculture Imagery Program (NAIP), Resource Aerial Photography, Common Land Unit (CLU) updates, National Resources Inventory (NRI) and Stewardship Land Inventory (SLI).

#### **Accomplishments**

APFO has dramatically expanded its ability to scan historical imagery. QAB identified that its inspection system was no longer sufficient to handle the major increase in productivity. Working with its ITSB partners, established a new inspection requirement that lead to a newly designed inspection system that can not only keep up with the new production capacity, but can exceed that capacity by several hundred scans an hour. This new historical inspection system has positioned QAB on very strong footing capable to accomplish any type of historical scan productivity rates in the future.

QAB took several months to manually placed barcode labels on 65,000+ canisters of film and then scanned and databased them into a tracking system to assist with the location of future move, yet to be determined.

#### **Quality Assurance Branch (cont.)**

QAB received 4 training sessions on web based geospatial tools to improve and acclimate to changing inspection work processes.

Attends bi-weekly NAIP contractor's meetings to discuss status, issues/concerns and resolve any problems before deliveries.

One employee participated on the Small Area Contract (NRI/SLI) solicitation evaluation panel. This exercise is to determine the best vendors to award contracts and participation for in the planning meeting for the following year.

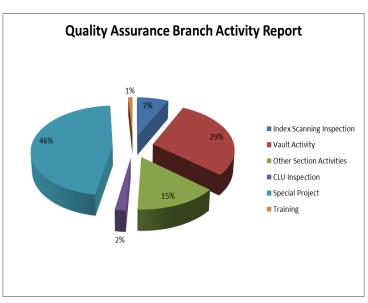
Developed and provided cost estimates for QAB inspection processes to APFO Contracting for use in the assistance of future and current customer contract award costing models. Attends pre-work meetings with APFO Contracting, Geospatial Branch, contractors and customers, to assure requirements and deliverables are clearly understood and answer questions and address any issues on the awarded contract. Three employees participated in four resource solicitation evaluation panels to determine best vendors to award contracted projects.

QAB is responsible for the APFO Safety Program. An annual facility safety inspection, semi-annual follow up review and monthly Fire Extinguisher inspections is performed by QAB and the Safety Team. The team refined and expanded the safety continuity binder by adding a section on natural disasters, individual safety precautions and additional basic first aid procedures that are common in the office and semi manufacturing work areas.

QAB participated in the future relocation requirements exercises and workshops, to include rescheduling of workloads and events, and communicated the required equipment and furniture needs and employee work space configurations.

#### **Branch Goals**

- Web based geospatial training to improve inspection work processes.
- Web services to streamline inspection process.
- Continued development and participation in future relocation requirements, so that QAB can continue to fully support USDA's mission.
- Develop digital inspection process for Stewardship Land Inventory (SLI) project.
- Develop procedures for scanning all historical film reports to enable digital access, archiving reports, and reduce square footage as applied to relocation of APFO.
- Provide QAB employees opportunities to cross-train and participate in the many roles, functions and responsibilities that QAB performs on behalf of APFO, FSA and USDA.



#### ORTHO IMAGERY INSPECTION SECTION

The Ortho Inspection team working in tandem with the rest of the Quality Assurance Branch and developed a 2014 500 day operational plan. We identified and organized tasks we felt were important to our mission, and that directly supported the APFO strategic plan. These efforts resulted in a 3 tiered task/project management road map—100% of the priority 1 task that could have been completed in the 2014 was completed, along with several tier 2 and 3 tasks. As the year progressed, and requirements changed we added other projects that were not originally identified, to the 500 day plan under an "other," and those that could have been accomplished in 2014 were accomplished:

**Accomplishment 1**: The successful completion of inspecting the 2013 NAIP the imagery contract equaling 23 states or 102,013 Quarter Quads.

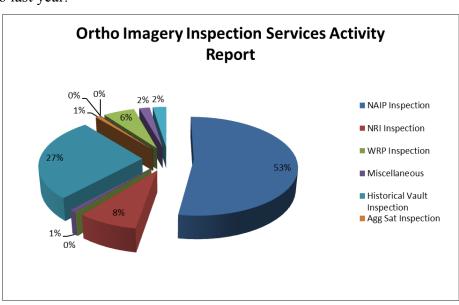
<u>Accomplishment 2:</u> Established inspection cycle speed requirements, implemented new inspection tool, and successfully the inspection of 74,032.0 historic vault scans

**Accomplishment 3:** Participated in the pilot project for the inspection of the NAIP Early Access, program. The results of this inspection data will be incorporated into a combined lesions action report that will affect future early access projects.

<u>Accomplishment 4:</u> The full design and implementation of the Agriculture Satellite (Agsat) inspection and tracking system.

<u>Accomplishment 5:</u> Continual efforts to identify and rectify imagery problems have seen a 30% decrease in customer reported defects as compared to last year.

NAIP Inspection	8420.1	52.6%
NRI Inspection	1310	7.0%
WRP Inspection	13.5	0.1%
Miscellaneous	133.25	0.8%
Historical Vault Inspection	4368.4	27.3%
Agg Sat Inspection	138.5	0.9%
Vault Operations	5	0.0%
Geospatial Support	912.5	5.7%
NAIP/Vault tool test and	308.25	1.9%
Training	391.45	2.4%



#### **Resource Imagery Inspection Section**

**Mission Statement:** To assure customer needs are met by providing quality assurance inspection, monitoring, and disseminating of imagery and geospatial data for the Resource Aerial Photography, National Resources Inventory (NRI), and Stewardship Lands Imagery (SLI).

#### Flight Planning

In FY2014 the section provided flight planning for 24,383 NRCS SLI easements sites and also reviewed 6 digital states submitted by contractors. We prepared 7 digital imagery based Resource projects that covered 16,620 square miles including the inspection of contractor submitted flight plans.

#### **Digital Imagery**

Inspection of six National Forests, five of which were 100% completed totaling of 15,689 square miles consisting of approximately 16 TB of data. Inspection deliverables included Digital Ortho Quads (DOQ), Digital Ortho Quarter-Quads (DOQQ), Digital Ortho Quarter-Quads (DOQQQ), GeoTIFFs, Stereo Imagery and Compressed Project Mosaic (CPM).

National Resources Inventory (NRI) Inspection

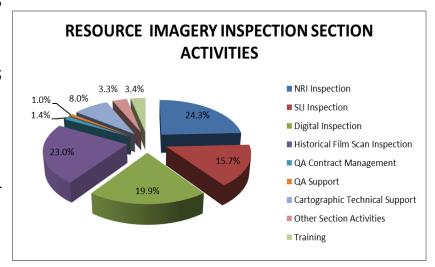
2014 NRI CONUS sites/scans inspected: 65,995 sites and 65,995 scans

**Stewardship Lands Imagery (SLI) Inspection** 2014 SLI CONUS sites/scans inspected: 20,205 sites and 20.205 scans

#### **Other Section Accomplishments**

Historical Film Scan Inspection

In FY2014 the section had 1,177 hours inspecting historical film scans.



#### **Other Section Accomplishments**

- Inspection of the Vault Index Scans, 209 hours were used to inspect 2,276 indexes and completion of 18 states from this project.
- Three employees participated on Technical Evaluation and Source Selection Teams for Four Forest Service Projects.
- One employee participated on Technical Evaluation and Source Selection Team for NRCS Project (NRI/SLI).
- Jeanette Tolliver served on the Equal Employment Opportunity Advisory Committee during FY14 as the Chairperson.

## Geospatial Services

#### USDA-FSA Aerial Photography Field Office, Geospatial Services Branch

#### <u>Summary Statement – FY14 Accomplishments</u>

- Ensured National Agriculture Imagery Program (NAIP) and other USDA imagery program technical specifications and standards are correct, and will produce products that meet FSA and USDA customer needs the first time around, saving countless dollars in both time and infrastructure resources by getting accurate, authoritative data to the customer as quickly as possible.
  - Second year of deploying APFO GPS unit to the FSA field, who successfully collected photo identifiable control points to support NAIP inspection, ensuring quality products first time. Points are databased and reusable for many years, multiplying their value over time.
  - Further built out specifications and managed project and reporting aspects of the NAIP Early Access Pilot. This Pilot could be a major game changer for NAIP delivery, where delivery of data as services could potentially be shortened from a few months to a few days. It is an endeavor that not only could yield high end user utility and satisfaction, but could also limit necessary agency infrastructure to support, as delivery of web services in the future could become mostly cloud based. Were able to provide access in Thin Client to these services for official work in the FSA field this year.
  - Worked to remodel NAIP Status Maps, moving from one map to four, to make status map messages easier to access and simpler to understand. These status map versions will be reviewed and may become the official status maps in the future, publicly accessible through the Esri ArcGIS Online (AGOL) platform.
  - Used the AGOL platform to construct live and editable customer feedback maps where both agency and public users can provide useful information on the status and quality of NAIP imagery, which helps consolidate input to take any necessary corrective action in a more efficient manner.
  - Completed NAIP flight planning for 48 states (25 which were flown) plus additional DOQQ's in Mexico.
- Worked with contractor to ensure web services containing various imagery sources in Non-CONUS areas are functioning optimally in support of enterprise GIS applications, enabling state and field office employees to do their jobs efficiently and in a timely manner, such that changes on the earth's surface can be positively detected and that field boundaries and acreages, which are directly tied to producer benefits, can be updated quickly and efficiently, providing for end customer satisfaction and more accurate record keeping. Built out several Esri ArcGIS Online status maps and maps containing imagery sources for review and continuous update.



AP2014 AgSat Alaska FSA Imagery—Glenn Highway Area

### Geospatial Services

#### USDA-FSA Aerial Photography Field Office, Geospatial Services Branch

#### Summary Statement - FY14 Accomplishments (cont.)

Built historical imagery products based on FSA and other customer requests, ensuring historical imagery products are spatially enabled such that the state, field offices, and other customers may track and trend changes over time, offering real visual evidence of land use/land cover change in support of various programs. Completed 8 georeferencing projects. Completed multiple years of historic ortho for the FSA

Minnesota State Office.

Primary FSA Administrator for the FSA ArcGIS Online (AGOL) Organizational Subscription and Department's Portal for ArcGIS solution, leading agency work and teaming with respect to AGOL. To date APFO has created and maintained 20+ public maps containing both status and imagery, in support of a multitude of programs, to include but not limited to NAIP, Resource, NRI, and AgSat. Ensured FSA public facing maps and services have entries on data.gov and thus geoplatform.gov to comply with federal directives.



ArcGIS Online NAIP Metadata Map with Links to all Metadata Files - All Years of NAIP

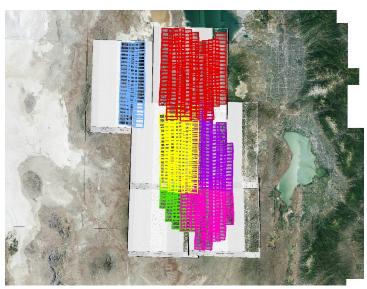
- Led FSA AgSat Data Delivery. AgSat is a BPA that FSA as well as other agencies can utilize to obtain satellite imagery. FSA has used AgSat to obtain data in hard to acquire locations (e.g. HI, AK, Pac Basin) as well as a demo for disaster recovery. APFO has processed AgSat data into web services for use in enterprise GIS applications (MIDAS and Thin Client), and has also produced multiple analysis web services available to the FSA user, such as vegetation, water, and surface indexes, that show evidence of surface water, vegetation health, impermeable surfaces, and so forth, better than traditional color or color infrared imagery. This year we were able to work with FSA AK and HI, to use available funds to obtain imagery for locations of FSA need. This data has been delivered and integrated into services for FSA enterprise applications. Developed AgSat data inspection process, which is fully cloud based and does not rely on any FSA infrastructure.
- Continued to support FSA field in custom analysis and disaster imagery projects. For example, used early
  access web services for identification of CRP violations. In addition, supported FSA field by utilizing
  multi-agency disaster imagery networks to obtain imagery in Colorado, Minnesota, Wisconsin, and Iowa,
  to support flood analysis and recovery operations for the agency. Requested data of a variety of types and
  formats, accessed data, processed data, and built data into web services accessible by the FSA field.

## Geospatial Services

#### USDA-FSA Aerial Photography Field Office, Geospatial Services Branch

#### <u>Summary Statement – FY14 Accomplishments (cont.)</u>

In a multi-disciplinary team setting, continued moving the Consolidated Historical Project (CHP) forward. The vision of CHP is "Modern day access to historical agricultural imagery assets" with a mission to "digitally and/or spatially enable historical imagery assets and provide access to all product lines, leveraging the most appropriate technology that results in useful viewing, research, analysis, and delivery methods for our customers". Transitioned CHP lead role to Production Services Branch. Continued to take primary role in repair of spatial indexes such that scans will become openly discoverable in a research interface, both to the internal and external customer base. Repaired 709 indices to date. Continued to have vault disposition discussions regarding degradation of film verses time to scan, historical ortho, and so forth.



Historical Imagery Spatial Index Repair

- Continued to be the primary APFO POC for MIDAS imagery. Continued to work and monitor progress and trouble shoot issues with imagery integration into the MIDAS Application from a business perspective. Planned and timed, providing status updates, of the deployment of the CONUS cache layer into MIDAS and Thin Client. To date, the cache is available in Thin Client but not MIDAS due to enterprise application compatibility issues. These issues are actively being worked. Ensured holes in MD NAIP were filled to support MIDAS and issues researched for Pac Basin Imagery.
- APFO primary contact for ACRSI. Led team responsible for the Geodatabase Specifications as well as the Accuracy and Projection Specifications. Participated in other sub teams as requested.
- Project Lead for FSA GPS refresh research.
- Worked on team to provide response to Congressional Inquiry regarding NAIP.
- Worked to draft new 1-AP revisions.
- Tackled Project Management role for the Resource Imagery Program.

The **TECHNOLOGY SERVICES BRANCH (TSB)** acts as the backbone of any APFO operation. By providing Information Technology Security and Support for agency specific applications TSB oversees all Data Management, Distribution and Application Development.

Imagery, pictures, and geo data are some of the names and formats for the images that are captured of America's farm and ranch lands. APFO has the largest collection of these images residing in a digital archive containing over 8 million image files equivilant to approx. 750 Terabytes, and a physical library of historical images (affectionately known as "the Vault") with 54,533 rolls of film and 83,875 photo indexes which is anticipated to scan into 6.5 Petabytes. APFO's film vault exists because aerial photography has been used for over half a century in the service of the USDA Farm Programs, but has also shown its importance stretching through nearly every facet of American Life.

Under the Technology Services Branch are two sections:

The **Digital Data Management and Distribution Section** performs data ingestion, archiving, distribution and fills large custom digital product orders while the **Application Development Section** supplies specific production application development while providing support and/or development of custom applications including management and development of databases.

Additional responsibilities include management of APFO web based applications and services, solution and development research and coordination of requirements with a variety of CIO-ITS organizations.

TSB supports both business and GIS applications in direct support of APFO business requirements, managing approximately 500TB (terabytes) of data on behalf of FSA and an additional 250 TB of data in support of other USDA agencies (NRCS, FS).

#### Provide project management on behalf of APFO for the following initiatives:

- Data Center Consolidation Initiative
   In coordination with NITC, developed agreement for the migration of all Public facing applications, servers and services to NITC.
- Oversaw the Acquisition and installation of (6) additional photo imagery scanners for Production Branch
- Provide oversight for the decommissioning of several legacy hardware systems, reducing overall power consumption by 20%
- Managed and participated in e-Waste, IT recycling hardware destruction events

#### **FSA Geospatial Management**

Completed updates of imagery services with integration of FY13 NAIP imagery for use in FSA applications Continued clean up support efforts on CLU dataset

Implemented new Download procedures for CLU distribution to authorized Partners to eliminate use of media from APFO Inventory

Developed and deployed optimized USA-Wide image service for use in FSA applications

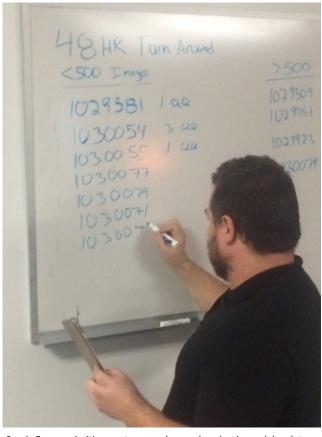
Redeveloped several GDW workflows and repositioned associated software components in conjunction with DCCI project

#### **Business Applications**

**Business Intelligence:** Created OBIEE dashboards for Production and Sales. The Production dashboard is heavily used and allows for quick access to frequently referenced data.

**Oracle Forms**: Updated the Historical Scans inspection form to include an imbedded Java Bean which allows the QA inspector to quickly evaluate the scan quality from an image thumbnail. This has decreased the inspection time of a frame from 3 minutes to 10 seconds. A 250 frame roll can now be inspected in 41 minutes instead of 12.5 hours. This improvement will allow QA to keep pace with the increased scanning capacity that will exist when we double the number of scanners without increasing the number of personnel.

**Oracle Reports**: Updated the Work Order and APFO Catalog reports from their previous dot-matrix format to a more modern Java Server page appearance. This will give our external customers a more positive impression of our organization.



 ${\it Randy Emero prioritizes customer order numbers by size and due\ dates}.$ 

**ACSLS:** Upgraded the ACSLS database from 6.0 to 8.3 as the project had been stalled for 2 years. This has enabled us to access our new 10T tapes and drives so that we will have adequate tape storage for our vault-scan project.

#### **GIS Inspection (Application Support)**

- Provided support of GIS Inspection processes as follows:
- Working on Python Scripting for ArcGIS training
- Setup a Certification and Tunnel in SSL. This can allow command prompt to run scripts with only asking for a password once a day rather than every time it runs an operation.
- Reviewing and recoding applications (where possible) to be used in a new C# framework
- Troubleshooting of flight planning tools
- Support of control point supplemental data issues.
- Reviewed all VBA coding on the mxd production tools, converted everything to write to the new database Customer service for the GSB Control Points. Modified the Selection Tolerance for the NaipTools\_10-1\_11G.mxd.

#### **Customer and NAIP partner orders**

- 396 Work Orders
- CCM 44,209
- QQs 3,181,662
- . CDs 30
- DVDs 195
- HDs 551/HD size (GB) 810,566
- Enclosure 357
- CLU 57,162
- Resource Imagery 108,325
- -JP2 Imagery 1,541,539
- Ingested 57,370 NAIP13 QQs, 299 NAIP13 CCMs, 15,487 NAIP14 QQs and 129 NAIP14 CCMs
- Resource Projects- Copied and delivered 34TB of data on 43 hard disks
- Updated Gateway catalogs, verified NAIP13 & NAIP14 catalogs were current
- Attended weekly Resource Data Gateway teleconference
- Maintained inventory of hard drives and enclosures for NAIP partner orders, external customer orders and in house master hard drive copy
- Issued hard drives to internal customers upon request (scanning, geospatial, TSB)

More than just connecting APFO to the Internet, TSB also provided support for:

#### **New Solutions:**

Replacement of Legacy Shipping system – new system will save FSA approximately \$1500 a month. Acquisition and Installation of new ZS3-2 (NAS) to support Film vault scanning processes and shutdown of older equipment.

*Implementation of WiseTrack Application* – Provides inventory management for Film Vault, Stock Items and IT equipment.

Implementation of Oracle Business Intelligence

Provides Easy to use dashboards for management in the oversight of APFO business processes, eliminating the need for TSB intervention in development of Branch reports.

Acquisition of Signiant Software – Provides an automated means to transfer data to and from partner agencies, minimizing the need for additional hardware such as hard drives and other media types, as well as minimizing the need for staff intervention in data transfer.

Acquisition of T10000 D Tape Drives

Each tape stores 8TB, uncompressed

Increased storage capacity of Tape Library (30 Exabytes)

Uses the same tapes as previous model, reducing costs associated with upgraded hardware.

Reduces need for staff intervention

*Implementation of TSB recommended eFax solution* 

Reduces communications cost thru the elimination of legacy phone numbers and hardware.

APFO Help Desk -

Implemented ticket system to ensure the highest customer satisfaction standards are maintained by assisting with problem resolution for APFP specific user issues as they relate to database, APFO applications, etc.

*Implemented ITS supported Fax2Mail solution.* 

### **Production Services**

APFO's Production Services Branch (PSB) is responsible for generating color and black and white aerial photographic products both from digital image files and film original source materials for various customers, including the Farm Service Agency (FSA), the National Resources Conservation Service (NRCS), and the U.S. Forest Service (USFS), as well as many other federal/non-federal agencies and the general public. The Branch is also responsible for photographic chemical mixing and chemical quality control as well as the electronic and mechanical maintenance of all production related equipment.

The Branch continued to create film scans at much greater volumes than it had in previous years. To illustrate that point in FY2014 119,874 B&W and color Historical Film scans were created, that more than doubled FY 2013's Historical scans of 71,591, and FY 2014 scans were more than all scans combined from FY 2004 through FY 2007 of 109,511. FY 2014's scanning effort was accomplished while supporting all other workloads without interruption.

The value of the Historical imagery is priceless and can never be replaced, the importance of preserving and making accessible the Historical images cannot be emphasized enough. If we fail to act responsibly it is quite likely that this precious-limited resource will no longer be readily available to assist our farmers and ranchers with land use, crop and livestock management. Today's NAIP acquisition provides a valuable snapshot of information, Historical imagery tells a story which a snapshot cannot convey. Because of the ongoing scanning efforts at APFO, the very people we directly support will be able to make more well informed decisions about land use decision which can have a greater positive impact on the food supply for consumers.

Historical Film Scans: 119,874

Total percentage of the Film Vault scanned: 1.61%

Historical Film Scanning – Utah Pilot: Start - 18.4% complete, currently in work on 1960 & 1961 B&W film End - 47.5% complete, 1980 in work

New inspection tool image viewer has been deployed this will significantly accelerate the inspection/acceptance process, inspection time per image reduced from 2 minutes to 5 seconds.

"At risk" film was previously identified through testing, all film associated with the "at risk" rolls will be grouped in the Utah Pilot project. The "at risk" group currently includes VA 1959, FL 1060, NC 1960, SC 1960, TX 1960, CA 1961, AR 1962 & VA 1962, and involves 618 cans of film totaling 100,519 exposures.



Jon Boyden scans historical filn

### **Production Services**

#### **Print production:**

We produced 13,513 digital prints for Forest Service Region 2 and 4 from imagery acquisition projects for the Tapash, Dixie and Fishlake National Forests

#### Equipment:

Photogrammetric Scanning equipment. In February two more scanners went operational and one in June which brought APFO's total to seven. In September six more scanner were delivered bringing our total inventory up to 13. By the end of FY 2015 production levels are estimated to be 100,000 scan per month. This will be a significant impact on APFO's ability to reduce the originally estimated Historical Film Scanning Projects overall time of scanning 3.9 million frames of ASCS/FSA film from eight years to less than four.

Print/Processing equipment. Four of five remaining LogE contact printers were eliminated from our inventory which leaves just one. This is a result of the aerial imagery industry shifting away from analog film to digital acquisition practices.

#### Other PSB activities:

Coordinated with the Air Force to transfer hundreds of Versamat film processing machine parts and assemblies for reuse to support strategic film imagery programs.

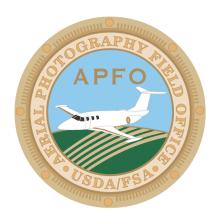
Blood Drives throughout the year collected 39 units to help the local community in need.



Rick Holt (1) and Mark Schneller (r) of the Production Services Branch Photo Production Section

### Employee Activities

The 1st quarter of FY 14 APFO capped off a celebration of the thing that made us all possible... AERIAL IMAGE-RY!! 75 years of it actually, from the early days of deploying photographers to the field to capture the conditions American Farmers and Ranchers operated in, to the images taken from aircraft today that serve a s a base layer for so many USDA and FSA programs.





APFO Equal Employment Opportunity programs provide employees with various opportunities to participate in events that promote workforce diversity. One such activity is the diversity education program "Lunch and Learn" where employees spend their lunch time learning about topics such as:

- Disability Awareness
- Native American Heritage
  - Black History

Some of the Employee Observance Activities included:

The Road Home \*\*\* Hispanic Heritage Month \*\*\* Sub for Santa

Utah Pet Adoption \*\*\* 26th Annual Utah Women's Conference \*\*\* Veteran's Day

Breast Cancer Awareness Month \*\*\* Women's History Month

Asian/Pacific Heritage Month \*\*\* Utah Food Bank

## Employee Activities



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